Thermal Control Film for Spacecraft

Abstract:

A thermal control film for use in spacecraft comprising a multi-layer interference filter adapted to exhibit high reflectivity to solar radiation, low absorptivity across the microwave spectrum and high emissivity in the far infrared is provided. The film is free from metal and extends over the active face of an antenna carried by the spacecraft. Such a film exhibits the desired thermo-optical properties for a thermal control radiator surface and can be used over the active face of a communications or radar antenna without disrupting the RF signal.

Figure 5

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